

IN THE CLAIMS

Please amend the claims as follows:

- 1-78. (cancelled)
79. (new) A vaccine composition comprising an effective amount of an isolated HP30 polypeptide of *Helicobacter* spp. or a HP30-derived polypeptide encoded by a nucleic acid molecule comprising the sequence of SEQ ID NO: 3 or by a nucleic acid molecule which hybridizes under high stringency conditions to the complement of a nucleic acid molecule comprising the sequence of SEQ ID NO: 3.
80. (new) A vaccine composition comprising an effective amount of an isolated HP30 polypeptide of *Helicobacter* spp. or a HP30-derived polypeptide comprising the sequence of SEQ ID NO: 4 or a sequence greater than 80% identical to SEQ ID NO: 4 which specifically binds an antibody that specifically binds to a polypeptide having the sequence of SEQ ID NO: 4.
81. (new) A vaccine composition comprising an effective amount of a HP30-derived polypeptide comprising a peptide fragment of at least 8 consecutive amino acids residues of SEQ ID NO: 4 wherein said peptide fragment specifically binds an antibody that specifically binds to a polypeptide having the sequence of SEQ ID NO: 4.
82. (new) A vaccine composition comprising an effective amount of a recombinant HP30 polypeptide of *Helicobacter* spp. or a HP30-derived polypeptide produced by a method comprising culturing a host cell under conditions suitable for expression of said polypeptide and recovering said polypeptide from said host

cell, wherein said host cell has been transformed or transfected with an expression vector comprising a nucleic acid molecule selected from the group consisting of:

- (A) a nucleic acid molecule comprising the sequence of SEQ ID NO: 3;
- (B) a nucleic acid molecule which hybridizes under high stringency conditions to the complement of a nucleic acid molecule comprising the sequence of SEQ ID NO: 3; and
- (C) a nucleic acid molecule encoding a polypeptide comprising the sequence of SEQ ID NO: 4 or a sequence greater than 80% identical to SEQ ID NO: 4 which specifically binds an antibody that specifically binds to a polypeptide having the sequence of SEQ ID NO: 4.

- 83. (new) The vaccine composition of any one of claims 79-82 wherein the *Helicobacter* spp. is *Helicobacter pylori*.
- 84. (new) The vaccine composition of any one of claims 79-82 wherein the *Helicobacter* spp. is *Helicobacter felis*.
- 85. (new) The vaccine composition of any one of claims 79-82 comprising a pharmaceutically acceptable carrier or diluent.
- 86. (new) The vaccine composition of any one of claims 79-82 additionally comprising one or more immunogens selected from the group consisting of lipids, lipoproteins, phospholipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.
- 87. (new) The vaccine composition of any one of claims 79-82 additionally comprising one or more immunogens selected from the group consisting of *H.*

pylori cytotoxin, *H. pylori* hsp60, *H. pylori* CagA, *H. pylori* urease, *H. pylori* catalase, *H. pylori* nickel binding protein, *H. pylori* tagA, *H. pylori* enolase, entire attenuated or killed organisms or subunits therefrom of *Campylobacter* spp., *Shigella* spp., Enteropathogenic *E. coli* spp., *Vibrio cholera* or rotavirus.

88. (new) The vaccine composition of any one of claims 79-82 additionally comprising one or more adjuvants or immunostimulatory compounds.